

Network Working Group
Internet Draft - CAP Requirements
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CAP Requirements

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Abstract

The Calendar Access Protocol (CAP) protocol defines administrative, calendar management, and calendar component management on calendar stores by owners, designates, and others. The purpose of this document is to set forth a list requirements that CAP must address in order to address the needs of the calendaring and scheduling community.

1. Introduction

The requirements are broken into the following categories:

- . Model
- . Administration
- . Component Management

Each of these is further broken down into requirements that a CAP implementation MUST support, and MAY support. In some cases, functionality which is specifically excluded from CAP is listed in a

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DOES NOT section. Those items where further input from the working group is needed are listed in a NEEDS DISCUSSION section.

1.1 Assumptions

1.
The data elements of CAP are based on iCalendar.

2. Model

MUST

1.
Support two connection models: (a) no data is stored on the client and (b) data is stored on both the client and the server and is synchronized periodically.
2.
Support a framework for authentication of a calendar user and for one calendar user to act as a designate or proxy for another user.
3.
Support a framework for the secure transport of data between the CUA and the CS.
4.
Define a calendar address.
5.
Specify the granularity of access control on calendar components.
6.
Enforce access control to calendar components
7.
Support capabilities negotiation to enable clients to determine the capabilities of a CAP server. Specify how a CUA queries a

Calendar Store to determine its attributes. The client must be able to determine which Components are supported by a given Calendar Store.

8.
Return error codes for valid commands that are not supported by the server.
9.
Provide the capability to search, select, and operate on calendar stores based on their properties. For example, a property of the store might be its owner.

MAY

1.
Allow Calendar Users to control the access that others have to their calendar. Setting access that a group has to a calendar may be supported.
2.
Supports two types of transactions. Type 1: if the request cannot be successfully completed on all calendar stores involved, don't do the operation at all. Type 2: complete the operation on as many calendar stores as possible. In either case, any failures must be reported to the client.

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3.
Support server-to-client notification. If the server supports this capability, it must notify a client when a CAP event occurs in which the client has registered interest.
4.
Supports server fan-out. The fan-out capability can be turned on or off.
5.
Provide for user-defined rules. Servers are not required to implement this functionality.
6.
Provide for the archiving (import and export) of calendar stores. Servers are not required to implement archiving.

7.
Provides for making referrals. That is, supply the new address for a user that is not on this calendar system. Servers are not required to make referrals.
8.
Support hierarchical calendar stores.
9.
Group names can be used to invite a list of attendees to an event or to-do. Group names can be used in setting access to events and todos. Servers are not required to explode a group name into a list of individuals.
10.
Provide support for interrupting a command in progress.
11.
Provide a mechanism to bound the latency of a response.
12.
Support the addition of functionality extensions. Commands on the wire should be able to invoke the extended functionality. (This is something akin to server plug-ins.)

DOES NOT

1.
Support for fetching components from multiple Calendar Stores simultaneously. (deferred)

NEEDS DISCUSSION:

1.
Should a CAP server provide any directory services or shall directory services be supplied by an external capability. Given that access control to calendar stores must be addressed, is there a need to standardize the way Calendar Users are identified?

3. Administration

MUST

1.
Support connect and authenticate the CU.

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2.
Create and delete calendar stores.
3.
Set and change ownership of a calendar store.
4.
Support setting and retrieving access control lists on calendars.
Determine the access levels.
5.
Support functions to add, modify, and delete calendar properties.
6.
Return a handle to a calendar store based on a supplied calendar
address and subject to access control.

MAY

1.
List calendar stores subject to access control.

DOES NOT

1.
Provide for server-to-server replication of calendar data.

4. Component Management

MUST

1.
Create, modify, and delete components in a calendar store.
2.
Create or modify a set of component attributes.
3.
Search for busy time on a calendar store.
4.
Allow for Draft storage of components
5.
Fetch components based on a query. The query language must

support (a) component property value comparisons and (b) component property parameter value comparisons. The query language must support queries consisting of multiple comparisons joined by boolean operators.

6.
Return the results of a Get filtered by a supplied list of attributes.
7.
Read a set of alarms/reminders in a calendar that are set to go off within a range of time.

MAY

1.
Support the expansion of a recurring event or to-do. If recurring expansion is supported, an error must be returned for any problems that occur in the expansion.
2.
Notifications on multiple stores.
3.
Modify, delete, and other? operations based on a query.

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4.
Add, modify, or delete components based on a query of calendar stores.

NEEDS DISCUSSION

1.
Get components from multiple stores in a single command.

[5.](#) **Acknowledgments**

The following have provided input in the drafting of this memo:

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